

Grade 7 Mini-Module: Slicing Three-Dimensional Figures

Aligns with [CCSS.MATH.CONTENT.7.G.A.3](#): Describe the two-dimensional figures that result from slicing three-dimensional figures, as in plane sections of right rectangular prisms and right rectangular pyramids.

Related Standards

- [CCSS.MATH.CONTENT.6.G.A.4](#): Represent three-dimensional figures using nets made up of rectangles and triangles, and use the nets to find the surface area of these figures. Apply these techniques in the context of solving real-world and mathematical problems.

PREVIEW



Objectives

In this module, you will learn and practice the following skills:

- Identify the resulting face shape when a solid is sliced parallel to its base.
- Identify the resulting face shape when a solid is sliced perpendicular to its base.
- Identify the resulting face shape when a solid is sliced at an angle to its base.

Let's get started!

Key Terms

- A **three-dimensional figure** is a geometric figure that has length, width, and depth.
- A **solid** is a three-dimensional figure.
- A **face** of a solid is one of its two-dimensional surfaces.
- An **edge** is formed where two faces of a solid meet.
- A **vertex** is formed where three or more edges of a solid meet.
- A **plane** is a flat surface.
- A **cross-section** of a solid is a two-dimensional face formed where the solid is cut.

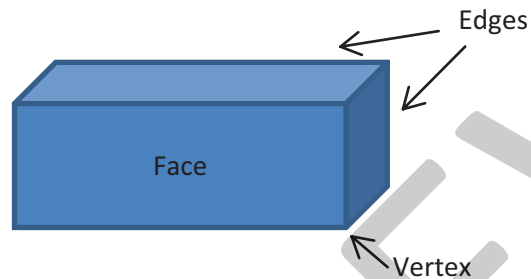


Slicing Three-Dimensional Figures

([CCSS.Math.Content.7.G.A.3](#))

A **three-dimensional figure** is a geometric figure that has length, width, and depth. Three-dimensional figures are also called **solids**.

The two-dimensional surfaces of solids are called faces. Two **faces** meet to form **edges**. Three or more edges meet to form **vertices**.



If a **plane** intersects a solid figure, it produces a **cross-section** of the solid. The cross-section is a two-dimensional shape. A solid may have more than one cross-section, depending on the position and angle of the plane.

A plane can slice a rectangular prism with square bases to produce a triangle, a square, or a rectangle.

